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ABSTRACT

The purpose of this study was to measure possible differences in comprehension, retention, and attitude change resulting from presentation of three versions of an oral persuasive message which varied in organizational structure to subjects differing in organizational ability as determined by the Goyer Organization of Ideas Test and an intelligence test. Variety in organization was achieved by preparing an adequately structured message, then rearranging its units into a random and a reversed version. Subjects were 246 college students enrolled in an introductory course on speech communication. Tests of attitude change and comprehension were developed and administered to all subjects. Three intact classes (one for each message treatment) of 49 students completed the same comprehension test three weeks later as a retention test. The results show that an organized message promoted greater comprehension of the material than a randomly assigned one. No significant differences in attitude change or in retention were found among the three groups although a high positive correlation between comprehension and retention was indicated. The study fails to support the assumption that a well-organized speech is more persuasive than a poorly organized one. (TO)

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EFFECTS OF MESSAGE ORGANIZATION ON ATTITUDE CHANGE, COMPREHENSION, AND RETENTION

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EFFECTS OF MESSAGE ORGANIZATION ON ATTITUDE CHANGE, COMPREHENSION, AND RETENTION

Speech teachers and writers of speech textbooks have generally assumed that careful organization of a speaker's materials is important in securing a favorable response from the listener.[1] Several studies have been done of the effect of organization on comprehension and retention of messages.

Darnell, in a study of the relationship between sentence order and comprehension, demonstrated through the use of Cloze procedure at the sentence level "that disorder can affect comprehension adversely and that the amount of loss of clarity becomes greater as the degree of disorganization occurs".[2] Thompson found no significant difference in attitude change from a well organized versus a randomly organized speech but found that organizational ability of the listener correlated positively with his score on both immediate and delayed comprehension tests.[3] Replication of Thompson's study added further support to the importance of organization in aiding comprehension of a message.[4] The three aforementioned studies along with ones by Beighley,[5] Petrie,[6] Thistlethwaithe, de Haan, and Kamenetzky,[7] and others all suggest that organization aids comprehension.

Few studies have been done which investigated the effects of organization on attitude change. Smith discovered that while minor disorganization had no significant effect on attitude change, major disorganization (two or more parts of the speech transposed) did have a significant effect.[8] In a study of order in presentation, Cohen found that when need-arousal material preceded informational material, subject's attitudes were more positive toward the topic of the material than when need-arousal and information were reversed.[9]

PROCEDURE

The purpose of this study was to measure possible differences in comprehension, retention, and attitude change resulting from presentation of three versions of an oral persuasive message which varied in organizational structure to subjects differing in organizational ability as determined by the Goyer Organization of Ideas Test[10] and intelligence as measured by SCAT.[11]

Organization is defined as the logical and strategic arrangement or sequence of ideas so there is a clear, coherent, unified account of the materials available.

Variety in organization was achieved by preparing an adequately structured message then rearranging its units. The adequately structured message followed a problem-solution format (need-arousal step before need-satisfaction step of the speech). In the reversed version, the need-arousal and need-satisfaction steps were reversed. In the random version, individual sentences were randomly rearranged within the introduction, body, and conclusion of the speech.

Subjects were 246 freshman, sophomore, junior, and senior male and female students enrolled in an Introduction to Speech Communication course. Tests of attitude change, comprehension, and retention were developed. The attitude test consisted of seven-point (strongly agree/strongly disagree) scales which were administered for several topics including the one used in this study--man's need to return to traditional religion. Pretest and immediate post test of attitude was administered to all 246 students. Forty-nine subjects comprising three intact classes (each class receiving a different message treatment) also received a three week delayed post test.

An immediate post test of comprehension consisting of sixteen multiple choice questions that required subjects to identify materials mentioned in the speech was administered to all 246 subjects. Again, the forty-nine students from three intact classes completed the same test three weeks later to determine retention. The mean item difficulty score for the sixteen questions was .54, judged to be satisfactory for purposes of this study.

The following hypotneses were tested:

1. Subjects receiving the adequately structured version of the message will have greater comprehension than those receiving reversed or random versions.
2. Subjects receiving the reversed version of the message will have greater comprehension than those receiving the random version.
3. Subjects receiving the adequtely structured version of the message will have greater retention than groups receiving reversed or random versions.
4. Subjects receiving the reversed version of the message will have greater retention than those receiving the random version.
5. Subjects receiving the adequately structured version of the message will have greater positive attitude change than those receiving reversed or random versions.
6. Subjects receiving the reversed version of the message will nave greater positive attitude change than those receiving

the random version.

7. There will be positive correlations between the following pairs of tests:
   a. Goyer and SCAT
   b. Comprehension and SCAT
   c. Comprehension and Goyer
   d. Retention and Goyer
   e. Retention and SCAT
   f. Comprehension and Retention

RESULTS

The first six hypotheses were tested with analyses of variance. Newman-Keuls a posteriori tests were used where appropriate. All parts of the seventh hypotheses were tested with Spearman Correlation Coefficients. The .05 level was required for statistical significance of all tests.

The first hypothesis was partially supported. A one-way analyses of variance of comprehension for the three versions was significant (F=30.5). Out of sixteen possible points, subjects receiving the adequately structured version of the message had a mean score of 9.9, those receiving the reversed version had 9.3, those receiving the random version had 6.4. The difference between the scores of those receiving the adequately structured version and those receiving the random version was significant. The difference score between the adequately structured and reversed versions, while in the predicted direction, was not significant. The second hypotheses was supported. Subjects receiving the reversed version of the message comprehended significantly more than those receiving the random version.

The third, fourth, fifth, and sixth hypotheses were not supported. Subjects receiving adequately structured, reversed, and random versions of the message did not differ significantly in attitude change either on the immediate post test or on the delayed test given three weeks later. Furthermore, there was no significant difference among the groups on retention measured three weeks after hearing the message.

The results of the correlations predicted in hypothesis 7 are summarized in the accompanying table. As mentioned earlier, scores for the Goyer and retention tests were obtained from only forty-nine subjects. The differing Ns for various tests were determined by the number of subjects available for which there was complete data. Analyses of the attitude change and comprehension scores for the forty nine subjects yielded nearly identical results to those from all 246 subjects thereby

indicating that the forty-nine subjects were representative of the larger sample.

The table shows that five of the six positive correlations predicted in hypothesis 7 were significant. The other correlation, while not significant, was in the predicted direction. The significant correlation between Goyer and SCAT scores indicates that a person's ability to organize relates positively to his intelligence as measured by SCAT. The significant positive correlations of both comprehension and retention with the Goyer test and SCAT indicate comprehension and retention are both related positively to one's ability to organize and intelligence as measured by SCAT. The relatively high correlation between comprehension and retention indicates that a person's ability to comprehend the message immediately after hearing the message relates strongly to his ability to retain the material over a period of three weeks.

DISCUSSION

The results of the present study did not confirm all of the hypotheses. However, in this study an organized message promoted greater comprehension of the material by an audience than a randomly organized one. There appeared to be little difference in comprehension when need-arousal and need-satisfaction materials were reversed. In other words presentation of need before satisfaction of the need does not appear to be an important determinant of comprehension in a persuasive speech. The differences found in the immediate post test of comprehension did not appear three weeks later in the test of retention. Possibly the decay effect mentioned by some writers on persuasion explains why no significant differences were found between groups on retention. Although scores from subjects hearing the randomly organized message did not change significantly from the immediate post test to the retention test three weeks later, the scores from subjects hearing the adequately structured or reversed message decreased. The relatively high positive correlation found between comprehension and retention, however, indicates that comprehension and retention are related. Further tests are needed to more fully determine the nature of this relationship.

The present study failed to support an assumption of many speech teachers and textbook writers that a well-organized speech is more persuasive than a poorly organized one. Failure to find differences in attitude change resulting from various types of organization may be due to the topic used. Religious topics tap deep-seated attitudes, beliefs, and values that are difficult to change. And the present topic, a call for man to return to traditional religion, may have been too conservative.

for a largely middle class, slightly liberal audience. With different topics and different audiences the results might vary.

The positive correlations predicted by the seventh hypothesis are not surprising. Intelligence as measured by SCAT correlated positively with ability to organize and comprehend. A decay effect operating with the retention scores may be responsible for the low correlation between SCAT and retention. The present study supports Thompson's conclusions that a person's ability to comprehend and retain material is related to his own ability to organize as measured by the Goyer test.

Although the findings from the present study should not be discounted, more extensive studies are being conducted in which different subjects and topics are used. Furthermore, the use of more subjects will allow analyses of variance and discriminate analyses to explore the interaction effects of intelligence, ability to organize, and message organization upon attitude change, comprehension, and retention.

TABLE OF
CORRELATIONS BETWEEN TESTS

Test	N	Correlation
Goyer/SCAT	36	.36*
Comprehension/SCAT	197	.42*
Comprehension/Goyer	45	.41*
Retention/Goyer	45	.50*
Retention/SCAT	32	.27
Comprehension/Retention	47	.71*

* Significant at .05

FOOTNOTES

[1]See for example: A Craig Baird, Franklin H. Knower, and Samuel Becker, General Speech Communication (4th Ed.; New York: McGraw-Hill Book Company, 1971), pp. 127-145; Alan H. Monroe and Douglas Ehninger, Principles and Types of Speech (6th Ed.; Glenview, Illinois: Scott, Foresman and Co., 1967), pp. 265-317. John W. Keltner, Interpersonal Speech-Communication (Belmont, Calif. Wadsworth Publishing Co., 1970), pp. 333-341.

[2]Donald K. Darnell, "The Relation Between Sentence Order and Comprehension", Speech Monographs, 30 (June, 1963), 100.

[3]Ernest Thompson, "An Experimental Investigation of the Relative Effectiveness of Organizational Structure in Oral Communication", The Southern Speech Journal, 26 (Fall, 1960), 69.

[4]Ernest Thompson, "Some Effects of Message Structure on Listener's Comprehension", Speech Monographs, 34 (March, 1967), 51-57.

[5]Beighley, K.C., "An Experimental Study of the Effect of Three Speech Variables on Listener Comprehension", Speech Monographs, 21 (Nov. 1954), 252.

[6]Charles R. Petrie, Jr., "Informative Speaking: A Summary and Bibliography of Related Research", Speech Monographs, 30 (June, 1963), 80.

[7]Donald L. Thistlethwaithe, Henry de Haan, and Joseph Kamensky, "The Effects of 'Directive' and 'Nondirective' Communication Procedures on Attitudes", Journal of Abnormal and Social Psychology, 51 (1955), 113.

[8]Raymond G. Smith, "An Experimental Study of the Effects of Speech Communication upon Attitudes of College Students", Speech Monographs, 18 (Nov. 1951), 299.

[9]Carl I. Hovland, ed., The Order of Presentation in Persuasion (New Haven: Yale University Press, 1957), p. 87.

[10]Robert S. Goyer, "A Study of Individual Differences in Ability and Achievement of College Students in the Organization of Ideas" (Unpublished Ph.D. Dissertation, Ohio State University, 1955).

[11]Handbook for SCAT: Series II (Princeton, N.J.: Educational Training Service, Cooperative Test Division, 1967).